In the Claims:

1. (Currently Amended) A method for producing a decoy infrared signature to direct an incoming infrared missile away from an aircraft infrared signature and to the decoy infrared signature, the method comprising the acts of:

deploying a towed IR decoy during~~proximate~~ at least one aircraft flight time period including aircraft take off and aircraft landing;

powering the IR decoy by a laser source;

producing the decoy infrared signature with the towed IR decoy, wherein the decoy infrared signature is brighter than the aircraft infrared signature produced by the aircraft, and wherein the decoy infrared signature is provided by fiber optic cables of various lengths; and

retracting the towed IR decoy after the aircraft reaches an altitude that is beyond a range of an~~the~~ infrared missile or proximate the time immediately preceding or after the aircraft has landed.

2. (Original) The method for producing a decoy infrared signature to direct an incoming infrared missile away from an aircraft

according to claim 1, wherein the act of retracting the towed IR decoy after take off is performed at approximately 10,000 feet.

3. (Original) The method for producing a decoy infrared signature to direct an incoming infrared missile away from an aircraft according to claim 1, further including the acts of: detecting the incoming infrared missile with a warning system; and responsive to said detecting act, deploying the towed IR decoy when the warning system has detected the incoming missile, and for retracting the towed IR decoy when the warning system is not detecting the incoming missile.

4. (Original) The method for producing a decoy infrared signature to direct an incoming infrared missile away from an aircraft according to claim 3 and responsive to said detecting act, further including the act of masking an infrared signature of an engine of the aircraft with an exhaust obscurant.

5. (Original) The method for producing a decoy infrared signature to direct an incoming infrared missile away from an aircraft according to claim 4, further including the acts of: repeating the

detecting act to detect the incoming infrared missile with the warning system; and responsive to said repeated detecting act, increasing intensity of the towed IR decoy by rapid modulation if the incoming infrared missile has been detected.

6. (Original) The method for producing a decoy infrared signature to direct an incoming infrared missile away from an aircraft according to claim 5, responsive to said repeated detecting act, increasing density of the exhaust obscurant if the incoming infrared missile has been detected.

7. (Currently Amended) An aircraft system for producing a decoy infrared signature to direct an incoming infrared missile away from an aircraft infrared signature and to the decoy infrared signature, the system comprising:

an IR decoy, for producing the decoy infrared signature;

a photonic source ~~via~~ powering fiber optic cables, said fiber optic cables having ~~of~~ various lengths, each varying length fiber optic cable having a terminating point a distance from a terminating point of other fiber optic cables, for directly radiating IR energy into the atmosphere from the termination

points, wherein the various lengths of fiber optic cables and distance between said termination points~~for powering and providing~~ provides said decoy infrared signature~~the IR decoy~~; and

a deployment and retraction device, for deploying and retracting the IR decoy proximate at least one time period including aircraft take off and aircraft landing.

8. (Previously Presented) The aircraft system according to claim 7, wherein the photonic source is a high power fiber laser.

9. (Original) The aircraft system according to claim 7, wherein the IR decoy includes heated elements.

10. (Cancelled)

11. (Original) The aircraft system according to claim 7, wherein the decoy infrared signature from the IR decoy is brighter than an infrared signature from an engine of the aircraft.

12. (Original) The aircraft system according to claim 7, further including a warning system, for detecting the incoming missile.

13. (Original) The aircraft system according to claim 12, further including an engine exhaust mask, for masking an infrared signature of an engine of the aircraft.

14. (Currently Amended) An aircraft system of an aircraft for detecting and avoiding an incoming infrared missile, the system comprising:

a warning system, for detecting the incoming missile;

a towed IR decoy, for producing an infrared signature decoy powered by a laser source within the aircraft by way of fiber optic cables after deployment from the aircraft wherein said fiber optic cables having various lengths, each varying length fiber optic cable having a terminating point a distance from a terminating point of other fiber optic cables, for directly radiating IR energy into the atmosphere from the termination points, wherein the various lengths of fiber optic cables and distance between said termination points provides said decoy infrared signature;

a deployment and retraction device, for deploying the IR decoy when the warning system has detected the incoming missile,

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and for retracting the towed IR decoy when the warning system is not detecting the incoming missile; and

an engine mask, for masking an infrared signature of an engine of the aircraft.

15. (Original) The aircraft system according to claim 14, wherein the engine mask is created by adding an additive to an exhaust stream of the engine.

16. (Original) The aircraft system according to claim 15, wherein the additive is oil, graphite-oil, or other IR blocking fluids.

17. (Previously Presented) The aircraft system according to claim 14, wherein said fiber optic cables at various lengths provide an extended IR signature to produce said IR decoy.

18. (Original) The aircraft system according to claim 14, wherein the towed IR decoy includes heated elements.

19. (Original) The aircraft system according to claim 14, wherein the infrared signature decoy from the towed IR decoy is brighter than the infrared signature from the engine of the aircraft.

20. (Previously Presented) The aircraft system according to claim 14, wherein said laser source is a high power fiber laser.

21. (Previously Presented) The method for producing a decoy infrared of claim 1, further comprising:

producing the IR decoy by directing emissions of the laser source with fiber optic cable providing an extended IR projections.